

## CLAIMS

We Claim:

- 1        1. A proprietary information utility comprising:
  - 2            an interface that provides outside entities connection to the
  - 3            proprietary information utility;
  - 4            a repository that contains proprietary information, wherein the
  - 5            repository is compartmentalized by user identity and entitlement, so that a
  - 6            first category of proprietary information is within private domains available
  - 7            to only a single user and a second category of proprietary information is
  - 8            within domains to which multiple users may be granted use in response to
  - 9            acquiring a license to use particular proprietary information within the
  - 10          second category of proprietary information;
  - 11          application services;
  - 12          a security system, that limits access of each user connecting to the
  - 13          proprietary information utility to proprietary information to which each
  - 14          user is entitled, the proprietary information to which each user is entitled
  - 15          being accessed through use of the application services; and,
  - 16          a billing system for tracking usage by users of the proprietary
  - 17          information utility for billing purposes.
- 1        2. A proprietary information utility as in claim 1 wherein the second
- 2          category of proprietary information includes decision support software.

1       3. A proprietary information utility as in claim 1 wherein the  
2 application services include services to perform at least one of the following  
3 activities related to patents:  
4           help identify patentable ideas;  
5           create patent disclosures;  
6           manage pending patents;  
7           manage research logs; and,  
8           research existing patents.

1       4. A proprietary information utility as in claim 1 wherein the  
2 application services include at least one of the services listed below:  
3           decision support software;  
4           software for troubleshooting products;  
5           system configuration services;  
6           diagnostic services;  
7           planning services;  
8           selection services;  
9           authoring tools that help authors generate appropriate software  
10 models;  
11          learning services for data-mining and the ongoing evolution of  
12 models;  
13          business intelligence services;  
14          version management services;  
15          presentation services;  
16          brokering services;

17 stock selection services;  
18 investment portfolio troubleshooting services;  
19 investment portfolio selection services;  
20 services to troubleshoot devices;  
21 medical diagnosis services;  
22 services that predict failure and behavior;  
23 purchasing decision services;  
24 consulting services;  
25 skills gap analysis services;  
26 translation services for translating decision support models from one  
27 underlying technology to another;  
28 enterprise resource planning services; and,  
29 customer relationship management services.

1 5. A proprietary information utility as in claim 1 wherein the first  
2 category of proprietary information contains health records and the  
3 application services include services to provide services for supporting  
4 healthcare and patients, without revealing private information.

1 6. A proprietary information utility as in claim 1 wherein the second  
2 category of proprietary information includes proprietary information within  
3 at least one of the areas listed below:  
4 decision support models; and,  
5 models associated with troubleshooting products;

1        7. A proprietary information utility as in claim 1 wherein the second  
2 category of proprietary information includes decision support models that  
3 are based on at least one of the technologies listed below:  
4              Bayesian networks;  
5              neural networks;  
6              case-based systems;  
7              model-based systems;  
8              rule-based systems;  
9              fuzzy systems;  
10             decision trees;  
11             genetic algorithms;  
12             Monte Carlo Markov chains;  
13             clustering algorithms;  
14             Monte Carlo optimization;  
15             simulated annealing;  
16             pattern matching;  
17             influence diagrams;  
18             online analytical processing;  
19             collaborative filtering;  
20             linear programming;  
21             machine learning; and,  
22             time series.

1        8. A proprietary information utility as in claim 1 wherein the  
2 interfaces allows users to connect to the proprietary information utility  
3 using at least one of the following deployment channels:  
4              wireless network;  
5              cellular phones;  
6              internet sites;  
7              applications embedded in appliances;  
8              applications embedded in devices;  
9              applications embedded in vehicle communication and information  
10 systems;  
11              applications embedded in intelligent agents; and,  
12              applications embedded in memory modules.

1        9. A proprietary information utility as in claim 1 wherein the  
2 application services include services to support the creation, maintenance,  
3 and deployment of decision support models, in at least one of the following  
4 areas:  
5              data-mining;  
6              usage reports;  
7              business intelligence reports;  
8              adaptive learning and refining of models;  
9              authoring wizards particular to specific horizontal and vertical  
10 industries; and,  
11              quality benchmarks of models.

1        10. A proprietary information utility as in claim 1 additionally  
2 comprising:

3              an application service registry that manages dynamic registration,  
4 access, use, and disposal of the application services.

1        11. A proprietary information utility as in claim 1 additionally  
2 comprising:

3              a proprietary information broker that maps semi-structured  
4 proprietary information requests to a most appropriate proprietary  
5 information model and application services that will operate on the most  
6 appropriate proprietary information model.

1        12. A proprietary information utility as in claim 1 wherein the  
2 security system provides non-repudiation services in support of billing and  
3 reporting

1        13. A proprietary information utility as in claim 1 wherein the  
2 security system provides privacy for all information transmitted outside of  
3 the proprietary information utility, allowing proprietary services to make  
4 use of proprietary information utility without revealing anything about  
5 users of the proprietary services and without revealing contents of data  
6 moving between services.

1        14. A proprietary information utility as in claim 1 wherein the billing  
2 system provides revenue to be generated using at least one of the following

3 pricing schemes:  
4 pay-per-use micro-transactions;  
5 vendor-visible service-based pricing;  
6 hybrid flows;  
7 subscription-based pricing; and,  
8 price bundling.

1 15. A proprietary information utility as in claim 1 additionally  
2 comprising:  
3 a scaleable computing engine that runs services across many pieces  
4 of information.

1 16. A proprietary information utility as in claim 1 additionally  
2 comprising:  
3 a computing engine, the computing engine being used to translate  
4 information from an author into a utility-native proprietary information  
5 format that can be used by at least a subset of application services within the  
6 proprietary information utility.

1 17. A proprietary information utility as in claim 1 wherein the billing  
2 system calculates royalty payments due to authors when proprietary  
3 information of the authors is used by the application services within the  
4 proprietary information utility.

1        18. A proprietary information utility as in claim 1 additionally  
2 comprising an application service registry that manages dynamic  
3 registration, access, use, and disposal of the application services, the  
4 application service registry providing a service catalog, a discovery  
5 mechanism, and a brokering interface that links with the proprietary  
6 information broker and the security system to provide a custom view of  
7 available application services; based on entitlement and visibility.

1        19. A method comprising the following steps:  
2            (a) providing outside entities connection to a proprietary information  
3 utility;  
4            (b) storing proprietary information within a repository, wherein the  
5 repository is compartmentalized by user identity and entitlement;  
6            (c) limiting access of each user connecting to the proprietary  
7 information utility to proprietary information to which each user is entitled,  
8 the proprietary information to which each user is entitled being accessed  
9 through use of application services operating within the proprietary  
10 information utility, wherein multiple users can be granted access to the  
11 same proprietary information; and,  
12            (d) tracking usage of users of the proprietary information utility for  
13 billing purposes.

1        20. A method as in claim 19 additionally comprising the following  
2 step:

3           (e) managing dynamic registration, access, use, and disposal of the  
4 application services.

1           21. A method as in claim 19 additionally comprising the following  
2 step:

3           (e) mapping semi-structured proprietary information requests to a  
4 most appropriate proprietary information model and application services  
5 that will operate on the most appropriate proprietary information model.

1           22. A method as in claim 19 wherein step (c) includes providing non-  
2 repudiation services in support of billing and reporting

1           23. A method as in claim 19 wherein step (c) includes providing  
2 privacy for all information transmitted outside of the proprietary  
3 information utility, allowing proprietary services to make use of proprietary  
4 information utility without revealing anything about users of the proprietary  
5 services and without revealing contents of data moving between services.

1           24. A method as in claim 19 wherein step (d) includes providing  
2 revenue to be generated using at least one of the following pricing schemes:  
3           pay-per-use micro-transactions;  
4           vendor-visible service-based pricing;  
5           hybrid flows;  
6           subscription-based pricing; and,  
7           price bundling.

1        25. A method as in claim 19 additionally comprising the following  
2 step:

3            (e) translating information from an author into a utility-native  
4 proprietary information format that can be used by at least a subset of  
5 application services within the proprietary information utility.

1        26. A method as in claim 26 wherein step (d) includes calculating  
2 royalty payments due to authors when proprietary information of the  
3 authors is used by the application services within the proprietary  
4 information utility.

1        27. A method as in claim 19 additionally comprising the following  
2 step: (e) providing a service catalog, a discovery mechanism to provide a  
3 custom view of available application services, based on entitlement and  
4 visibility.

1        28. A method comprising the following steps:  
2            (a) providing outside entities connection to information within a  
3 proprietary information utility;  
4            (b) storing proprietary information within a repository, wherein the  
5 repository is compartmentalized by user identity and entitlement;  
6            (c) limiting access of each user connecting to the proprietary  
7 information utility to proprietary information to which each user is entitled,  
8 the proprietary information to which each user is entitled being accessed

9 through use of application services operating within the proprietary  
10 information utility;

11 (d) mapping semi-structured proprietary information requests to a  
12 most appropriate proprietary information model and application services  
13 that will operate on the most appropriate proprietary information model ;  
14 and,

15 (e) translating information from an author into a utility-native  
16 proprietary information format that can be used by a least a subset of  
17 application services within the proprietary information utility.

1 29. A method comprising the following steps:

2 (a) providing outside entities connection to information within a  
3 proprietary information utility;

4 (b) storing proprietary information within a repository, wherein the  
5 repository is compartmentalized by user identity and entitlement;

6 (c) limiting access of each user connecting to the proprietary  
7 information utility to proprietary information to which each user is entitled,  
8 the proprietary information to which each user is entitled being accessed  
9 through use of application services operating within the proprietary  
10 information utility; and,

11 (d) providing a service catalog, a discovery mechanism to provide a  
12 custom view of available application services, based on entitlement and  
13 visibility.